Maulana Azad College
Department of Mathematics
Teaching / Lesson Plan 2022-23, Undergraduate Mathematics (Honours and General) under CBCS, 2018

Semester, [Honours / General], [Period of Semester]	Course Code	Course Name	Brief Description of the Topics	Name of the Faculty	No. of Lectures
Sem - 1 Honours (July - December, 2022)	CC-1 (TH+TU)	Calculus, Geometry & Vector Analysis	Unit-1: Calculus	Dr. Nanda Das	25+5
			Unit-2: Geometry-2D	Dr. Nanda Das	10
			Unit-2: Geometry-3D	Dr. Kartik Chandra Basak	20
			Unit-3: Vector Analysis	Dr. Kartik Chandra Basak	15
	CC-2 (TH+TU)	Algebra	Unit-1: Complex Number, Theory of Equation, Inequality, Linear Difference Equation.	Dr. Babli Saha	30
			Unit-2: Relation, Mapping and Integers.	Dr. Somnath Bandyopadhyay	30
			Unit-3: Matrix Algebra, Solution of System of Linear Equations.	Dr. Babli Saha	15
Sem - 1 General (July - December, 2022)	GE - 1 (TH+TU)	Mathematics-GE1	Unit-1: Algebra-I	Dr. Somnath Bandyopadhyay	10
			Unit-2: Differential Calculus-I	Dr. Babli Saha	20
			Unit-3: Differential Equation-I	Dr. Kartik Chandra Basak	10
			Unit-4: Coordinate Geometry	Dr. Nanda Das	20
Sem - 2 Honours (January - June, 2023)	CC - 3 (TH+TU)	Real Analysis	Unit-1: Real Numbers	Dr. Somnath Bandyopadhyay	30
			Unit-2: Real Sequence	Dr. Somnath Bandyopadhyay	30
			Unit-3: Infinite Series	Dr. Somnath Bandyopadhyay	10+5
	CC - 4 (TH+TU)	Group Theory-I	Unit-1: Group & Subgroup	Dr. Babli Saha	30
			Unit-2: Cyclic Group	Dr. Babli Saha	25
			Unit-3: Normal Subgroup	Dr. Babli Saha	20
Sem - 2 General (January - June, 2023)	GE - 2 (TH+TU)	Mathematics GE2	Unit-1: Differential Calculus-II	Dr. Babli Saha	15
			Unit-2: Differential Equation-II	Dr. Kartik Chandra Basak	10
			Unit-3: Vector Algebra	Dr. Nanda Das	10
			Unit-4: Discrete Mathematics	Dr. Somnath Bandyopadhyay	25

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Sem - 3 Honours (July - December, 2022)	CC-5 (TH+TU)	Theory of Real Functions	Unit-1: Limit and Continuity of functions	Dr. Somnath Bandyopadhyay	40
			Unit-2: Differentiability of Functions	Dr. Somnath Bandyopadhyay	35
	CC-6 (TH+TU)	Ring Theory & Linear Algebra-I	Unit-1: Ring Theory	Dr. Babli Saha	35
			Unit-2: Linear Algebra	Dr. Babli Saha	40
	CC-7 (TH+TU)	Ordinary Differential Equation & Multivariate Calculus-I	Unit-1: Ordinary Differential Equation	Dr. Kartik Chandra Basak	40
			Unit-2: Multivariate Calculus-I	Dr. Nanda Das	35
	SEC-A1 (TH)	C-Programming Language	Constants, Variables & Data type , Control Statements, Array, User defined functions, Library functions.	Dr. Nanda Das	30
Sem - 3 General (July - December, 2022)	GE-3 (TH+TU)	Mathematics-GE3	Unit-1: Integral Calculus	Dr. Babli Saha	10
			Unit-2: Numerical Methods	Dr. Kartik Chandra Basak	25
			Unit-3: Linear Programming (Theory)	Dr. Somnath Bandyopadhyay	10
			Unit-4: Linear Programming (Theory)	Dr. Nanda Das	15
Sem - 4 Honours (January - June, 2023)	CC-8 (TH+TU)	Riemann Integration and Series of Functions	Unit-1: Riemann Integration	Dr. Somnath Bandyopadhyay	35
			Unit-3: Power Series	Dr. Somnath Bandyopadhyay	5
			Unit-2: Improper Integral	Dr. Babli Saha	10
			Unit-3: Sequence of Functions, Series of Functions and Fourier Series.	Dr. Babli Saha	25
	CC-9 (TH+TU)	PDE & Multivariate Calculus-II	Unit-1: Partial Differential Equation.	Dr. Kartik Chandra Basak	40
			Unit-2: Multivariate Calculus-II	Dr. Nanda Das	35
	CC-10 (TH+TU)	Mechanics	Unit-3: Kinematics of a Particle, Newton Laws of motion and Law of gravitation.	Dr. Kartik Chandra Basak	20
			Unit-4: Problems in particle dynamics, Planar motion of a particle, Motion of a particle in 3D.	Dr. Kartik Chandra Basak	20
			Unit-1: Coplanar forces, Force system in space, Friction	Dr. Nanda Das	15
			Unit-2: Virtual work, Stability of equilibrium.	Dr. Nanda Das	10
			Unit-5: Many particles system	Dr. Nanda Das	10
	SEC-B1 (TH)	Scientific Computing with Sage Math.	Numeric Computation, Plotting of functions, Programming and Applications.	Dr. Kartik Chandra Basak	30
Sem - 4 General (January - June, 2023)	GE-4 (TH+TU)	Mathematics GE4	Unit-1: Algebra-II (Vector Space)	Dr. Babli Saha	10
			Unit-1: Algebra-II (Group Theory, Ring and Field)	Dr. Somnath Bandyopadhyay	10
			Unit-2: Computer Science and Programming.	Dr. Nanda Das	15
			Unit-3: Probability and Statistics	Dr. Kartik Chandra Basak	25

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Sem - 5 Honours (July - December, 2022)	CC-11 (TH+TU)	Probability & Statistics	Unit-1: Basic theory, Distribution-I, Expectation-I.	Dr. Kartik Chandra Basak	20
			Unit-2: Distribution-II, Expectation-II.	Dr. Kartik Chandra Basak	15+5
			Unit-3: Convergence in Probability.	Dr. Nanda Das	5
			Unit-4: Sampling Distribution, Estimation of Parameters.	Dr. Nanda Das	15
			Unit-5: Statistical Hypothesis.	Dr. Nanda Das	15
	CC-12 (TH+TU)	Group Theory-II & Linear Algebra-II	Unit-1: Group Theory	Dr. Somnath Bandyopadhyay	35
			Unit-2: Linear Algebra	Dr. Babli Saha	40
	DSE-A1 (TH+TU)	Bio Mathematics	Unit-1: Math. Biology and Modelling process.	Dr. Nanda Das	25
			Unit-2: Activator and Inhibitor system model.	Dr. Nanda Das	30
			Unit-3: Discrete models.	Dr. Nanda Das	15+5
	DSE-B1 (TH+TU)	Linear Programming & Game Theory	Unit-1: Formulation and Basic theory of LPP.	Dr. Babli Saha	15
			Unit-2: Simplex method, Two-phase method.	Dr. Babli Saha	20
			Unit-3: Duality Theory and applications.	Dr. Somnath Bandyopadhyay	10
			Unit-4: Transportation and Assignment problems and Game Theory.	Dr. Somnath Bandyopadhyay	30
Sem -6 Honours (January - June, 2023)	CC-13 (TH+TU)	Metric Space & Complex Analysis	Unit-1: Metric Space	Dr. Babli Saha	40
			Unit-2: Complex Analysis	Dr. Babli Saha	35
	CC-14 (TH+P)	Numerical Methods	Unit-1: Error & Numerical Algorithms	Dr. Nanda Das	5
			Unit-2: Approximation and Interpolation	Dr. Kartik Chandra Basak	15
			Unit-3: Differentiation and Integration.	Dr. Kartik Chandra Basak	10
			Unit-4: Solution of Transcendental Equations.	Dr. Kartik Chandra Basak	10
			Unit-5: Solution of linear system of equations.	Dr. Nanda Das	10
			Unit-6: Solution of ODE	Dr. Nanda Das	5
		Numerical Methods LAB	Using C Programming (Computer Lab)	Dr. Nanda Das	20
	DSE-A2 (TH+TU)	Mathematical Modelling	Unit-1: Power Series Solution of Bessel's, Legendre's equations, Laplace Transform.	Dr. Nanda Das	20
			Unit-2: Monte Carlo Simulation modelling, Queuing models, Harbor system, Optimization modelling, LP model, Simples Method, Sensitivity analysis.	Dr. Nanda Das	45+10
	DSE-B2 (TH+TU)	Point Set Topology	Unit-1: Topological Space, basis up to isometry and metric invariants.	Dr. Somnath Bandyopadhyay	35
			Unit-2: First Countability, etc. up to Heine's continuity criterion.	Dr. Somnath Bandyopadhyay	15
			Unit-3: Connected Spaces, etc up to Bolzano- Weiertrass property of matric space X.	Dr. Somnath Bandyopadhyay	25

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